INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE

RAIS BIONIC FIRE

IMPORTANT INFORMATION

On first lighting the stove you must be careful not to touch the painted surfaces and it is MOST IMPORTANT that the door is kept slightly 'ajar' in order for the door seal and sealant to cure.
This will prevent the door seal sticking to the painted body and becoming damaged.

NORDISK MILJØMÆRKNING 5178 005

FIRE ENVIRONMENTALLY FRIENDLY!

3 Eco-friendly advices for sensible heating
- common sense both environmentally and economically.

1. Effective lighting. Use dry brushwood, kindling and possible a piece of newspaper.
2. Light the fire with only little wood at a time - this gives the best combustion.
3. Use only dry wood - ie wood with a humidity of 15 to 22 percent.

The oven is wrapped in packaging that is recyclable. This must be disposed of according to national rules regarding the disposal of waste.

The glass can not be reused.
The glass should be discarded along with the residual waste from ceramics and porcelain.
Pyrex glass has a higher melting temperature and therefore can not be reused.
If discarded you make an important positive contribution to the environment.

We cannot be held responsible for any misprints.

Rais Bionic Fire

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SUPPLEMENTARY INSTALLATION INSTRUCTIONS FOR THE UK MARKET TO BE READ IN CONJUNCTION WITH THOSE IN THE INSTRUCTION BOOKLET

READ THE INSTRUCTION BOOKLET AND THESE SUPPLEMENTARY INSTRUCTIONS CAREFULLY BEFORE INSTALLATION

These instructions together with those in the instruction booklet cover the basic principles to ensure the satisfactory installation of the stove, although detail may need slight modification to suit particular local site conditions.

In all cases the installation must comply with current Building Regulations, Local Authority Byelaws and other specifications or regulations as they affect the installation of the stove.
It should be noted that the Building Regulations requirements may be met by adopting the relevant recommendations given in British Standards BS 8303, BS EN 15287-1:2007 as an alternative means to achieve an equivalent level of performance to that obtained following the guidance given in Approved Document J.

Please note that it is a legal requirement under England and Wales Building Regulations that the installation of the stove is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at www.hetas.co.uk.

CO Alarms:-
Building regulations require that when ever a new or replacement fixed solid fuel or wood/biomass appliance is installed in a dwelling a carbon monoxide alarm must be fitted in the same room as the appliance. Further guidance on the installation of the carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturer's instructions. Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

HEALTH AND SAFETY PRECAUTIONS

Special care must be taken when installing the stove such that the requirements of the Health and Safety at Work Act are met.

Handling
Adequate facilities must be available for loading, unloading and site handling.

Fire Cement
Some types of fire cement are caustic and should not be allowed to come into contact with the skin. In case of contact wash immediately with plenty of water.

Asbestos
This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts
When installing or servicing this stove care should be taken to avoid the possibility of personal injury.

STOVE PERFORMANCE

In the UK the stove has been approved by HETAS Ltd as an intermittent operating appliance for burning wood logs only.

PREPARATORY WORK AND SAFETY CHECKS

IMPORTANT WARNING

This stove must not be installed into a chimney that serves any other heating appliance.
There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.

Chimney

For the stove to perform satisfactorily the chimney height must be sufficient to ensure an adequate draught of approximately 15 Pa so as to clear the products of combustion and prevent smoke problems into the room.

NOTE: A chimney height of not less than 4.5 metres measured vertically from the outlet of the stove to the top of the chimney should be satisfactory. Alternatively the calculation procedure given in EN 13384-1 may be used as the basis for deciding whether a particular chimney design will provide sufficient draught.

The outlet from the chimney should be above the roof of the building in accordance with the provisions of Building Regulations Approved Document J.

If installation is into an existing chimney then it must be sound and have no cracks or other faults which might allow fumes into the house. Older properties, especially, may have chimney faults or the cross section may be too large i.e. more than 230 mm x 230 mm. Remedial action should be taken, if required, seeking expert advice, if necessary. If it is found necessary to line the chimney then a flue liner suitable for solid fuel must be used in accordance with Building Regulations Approved Document J.

Any existing chimney must be clear of obstruction and have been swept clean immediately before installation of the stove. If the stove is fitted in place of an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

If there is no existing chimney then either a prefabricated block chimney in accordance with Building Regulations Approved Document J or a twin walled insulated stainless steel flue to BS 4543 can be used. These chimneys must be fitted in accordance with the manufacturer's instructions and Building Regulations.

A single wall metal fluepipe is suitable for connecting the stove to the chimney but is not suitable for using for the complete chimney. The chimney and connecting fluepipe must have a minimum diameter of 150 mm and its dimension should be not less than the size of the outlet socket of the stove.

Any bend in the chimney or connecting fluepipe should not exceed 45°. 90° bends should not be used.

Combustible material should not be located where the heat dissipating through the walls of fireplaces or flues could ignite it. Therefore when installing the stove in the presence of combustible materials due account must be taken of the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions.

If it is found that there is excessive draught in the chimney then a draught stabiliser should be fitted. Fitting of a draught stabiliser will affect the requirement for the permanent air supply into the room in which the stove is fitted in accordance with Approved Document J (see also combustion air supply).

Adequate provision e.g. easily accessible soot door or doors must be provided for sweeping the chimney and connecting fluepipe where it is not intended for the chimney to be swept through the appliance, also to permit visual checks on the integrity of the flue when the appliance is serviced.

Hearth

The hearth should be able to accommodate the weight of the stove and its chimney if the chimney is not independently supported. The weight of the stove is indicated in the brochure.

The stove should always be installed on a non-combustible hearth of a size and construction that is in accordance with the provisions of the current Building Regulations Approved Document J.

The clearance distances to combustible material beneath, surrounding or upon the hearth and walls adjacent to the hearth should comply with the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions.

If the stove is to be installed on a combustible floor surface, it must be covered with a non-combustible material at least 12mm thick, in accordance with Building Regulations Approved Document J, to a distance of 30 cm in front of the stove and 15 cm to each side measuring from the door of the combustion chamber

Combustion air supply

In order for the stove to perform efficiently and safely there should be an adequate air supply into the room in which the stove is installed to provide combustion air. This is particularly necessary if the room is double-glazed or a flue draught stabiliser is operating in the same room as the appliance. It may be necessary to increase the air vent size in property with low air permeability ($\leq$ 5.0 m^3 /($h.m^2$).
The provision of air supply to the stove must be in accordance with current Building Regulations Approved Document J. An opening window is not appropriate for this purpose.
IMPORTANT NOTE: If applicable and the appliance is being fitted within an existing fireplace recess, specialist advice should be sought before fitting any permanent ventilation within this area.

Connection to chimney

Stoves may have a choice of either a rear or top flue gas connector that allows connection to either a masonry chimney or a prefabricated factory made insulated metal chimney in accordance with their instructions. In some cases it may be necessary to fit an adaptor to increase the diameter of the flue to the minimum required 150 mm section of the chimney or liner.

Electrical Services

The installation of any electrical services during the installation of this appliance must be carried out by a registered competent electrician and in accordance with the requirements of the latest issue of BS 7671

Carbon Monoxide Alarm

A carbon monoxide alarm complying with BS EN 50292 must be fitted in the same room as the appliance. It should be positioned on the ceiling at least 300mm from any wall or, if it is located on a wall, as high up as possible (above any doors and windows) but not within 150mm of the ceiling. The alarm should also be between 1m and 3m horizontally from the appliance.

Commissioning and handover

Ensure loose parts are fitted in accordance with the instructions given in the instruction booklet.

On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, when a small fire may be lit and checked to ensure the smoke and fumes are taken from the stove up the chimney and emitted safely to atmosphere. Do not run at full output for at least 24 hours.

On completion of the installation and commissioning ensure that the operating instructions for the stove are left with the customer. Ensure to advise the customer on the correct use of the appliance with the fuels likely to be used on the stove and warn them to use only the recommended fuels for the stove.

Advise the user what to do should smoke or fumes be emitted from the stove. The customer should be warned to use a fireguard to BS 8423:2002 in the presence of children, aged and/or infirm persons.

SUPPLEMENTARY OPERATING INSTRUCTIONS FOR THE UK MARKET TO BE READ IN CONJUNCTION WITH THOSE IN THE INSTRUCTION BOOKLET

READ THE INSTRUCTION BOOKLET AND THESE INSTRUCTIONS CAREFULLY BEFORE USING THE STOVE

WARNING NOTE

Properly installed, operated and maintained this stove will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. In the event of fume emission from the appliance, then the following immediate action should be taken: -

(a) Open doors and windows to ventilate room and then leave the premises
(b) Let the fire go out
(c) When safe to do so, check for flue or chimney blockage and clean if required
(d) Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

The most common cause of fume emission is flueway or chimney blockage. For your own safety these must be kept clean at all times.

IMPORTANT NOTES

General

Before lighting the stove check with the installer that the installation work and commissioning checks described in the installation instructions have been carried out correctly and that the chimney has been swept clean, is sound and free from any obstructions. As part of the stoves' commissioning and handover the installer should have shown you how to operate the stove correctly.

CO Alarm

Your installer should have fitted a CO alarm in the same room as the appliance. If the alarm sounds unexpectedly, follow the instructions given under "Warning Note" above.

Use of fireguard

When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002 (Replaces BS 6539).

If the fire is left unattended a spark guard to BS 3248, specification for spark guards for use with solid fuel appliances should be used.

Chimney cleaning

The chimney should be swept at least twice a year. It is important that the flue connection and chimney are swept prior to lighting up after a prolonged shutdown period.

If the stove is fitted in place of an open fire then the chimney will require sweeping after a month of continuous operation. This is a precaution to ensure that any "softer" deposits left from the open fire usage have not been loosened by the higher flue temperatures generated by the closed stove.

In situations where it is not possible to sweep through the stove the installer will have provided alternative means, such as a soot door. After sweeping the chimney the stove flue outlet and the flue pipe connecting the stove to the chimney must be cleaned with a flue brush.

The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise

smokeless fuels or exempt appliances for use in smoke control areas in England. In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been "authorised" in Regulations and that appliances used to burn solid fuel in those areas (other than "authorised" fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

Rais Bionic
Has been recommended as suitable for use in smoke control areas when burning wood. The air controls are factory set to allow a certain amount of combustion air when the controls are fully closed, the controls must not be modified in any way. The Q-Tee II model (only) is also approved for use with approved mineral fuels.

Further information on requirements of the Clean Air Act can be found at: http://smokecontrol.defra.gov.uk/ Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements

Special Notes for use in a Smoke Control Area:

Refuelling on to a low fire bed:
If there is insufficient burning material in the firebed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke

Fuel overloading:
The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke. (See Page 9 for Refuelling details).

Operation with door left open:
Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.

Dampers left open:
Operation with the air controls or dampers open can cause excess smoke. The appliance must not be operated with air controls or dampers left open except as directed in the instructions.

Periods of Prolonged Non-Use

If the stove is to be left unused for a prolonged period of time then it should be given a thorough clean to remove ash and unburned fuel residues. To enable a good flow of air through the appliance to reduce condensation and subsequent damage, leave the air controls fully open.

Extractor fan

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

Aerosol sprays

Do not use an aerosol spray on or near the stove when it is alight.

Use of operating tools

Always use the operating tools provided when handling parts likely to be hot when the stove is in use.

Chimney Fires

If the chimney is thoroughly and regularly swept, chimney fires should not occur. However, if a chimney fire does occur turn off the stove immediately and isolate the mains electricity supply (if applicable), and tightly close the doors of the stove. This should cause the chimney fire to go out. If the chimney fire does not go out when the above action is taken then the fire brigade should be called immediately. Do not relight the stove until the chimney and flueways have been cleaned and examined by a professional.

Permanent air vent

The stove requires a permanent and adequate air supply in order for it to operate safely and efficiently.
In accordance with current Building Regulations the installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion air. This air vent should not under any circumstances be shut off or sealed.

USER OPERATING INSTRUCTIONS - WOOD

Please read the important notices given above before referring to the main instruction book for detailed operating instructions.

HETAS Ltd Approval

These appliances have been approved by HETAS Ltd as intermittent operating appliances for burning wood logs only. Approval does not cover the use of other fuels either alone or mixed with the recommended fuel, nor does it cover the instructions for the use of other fuels. (Note the Q-Tee II model only is also approved for use with approved mineral fuels.)

Recommended fuels

These stoves are designed to burn dry seasoned wood logs only, as indicated in the main stove manuals. The maximum length of the firewood should be the width of the combustion chamber minus 50-60mm (250mm approx).

Door operation

The door handle may become hot during operation, use the tool to open and close the doors, if appropriate.

Lighting of fire

Place some firelighters or paper and dry kindling wood on the grate and cover with a small amount of fuel. Set air controls to maximum and set light to firelighters or paper. Close the doors and allow fire to burn until fuel is well alight then load with more fuel and adjust air controls to the required level of heat output.

Before relighting the fire clean the firebed of ash and clinker and empty the ashpan.

Refuelling

Keep the firebox well filled (the fuel may be sloped up from the front firebars), but do not allow fuel to spill over the top of the front fire bars. Take care that fuel does not project over the front fire bars or damage to the glass may be caused when the doors are closed

Flueway cleaning

It is important that the baffle plate and all the stove flueways are kept clean. When burning smokeless fuels they should be cleaned at least monthly. When burning other fuels they should be cleaned at least once a week, and more frequently if necessary.
Remove any sooty deposits from the baffle plate until they fall off into the fire.
More soot will be deposited on the baffle plate and in the flueways if the stove is run at low levels for long periods. If this is the case then more frequent cleaning will be necessary.

Cleaning and maintenance

The instructions detailed in the section “Maintenance” in the instruction booklet should be followed.

Spare Parts

Spare parts can be obtained from Robeys Limited 01773 820 940

Trouble shooting

The instructions detailed in the relevant section in the instruction booklet should be followed together with the following additional items:

1. **Fire Will Not Burn**
   Check that:
   a) the air inlet is not obstructed in any way,
   b) that chimneys and flueways are clear,
   c) that a suitable fuel is being used,
   d) that there is an adequate air supply into the room,
   e) that an extractor fan is not fitted in the same room as the **fire.**

2. **Fire Blazing Out Of Control**
   Check that:
   a) the doors are tightly closed,
   b) the air control is turned down to the minimum setting,
   c) the air inlet damper is closed and that it is not prevented from closing completely by a piece of ash,
   d) a suitable fuel is being used,
   e) the door seals are in good condition.

Introduction

Thank you for purchasing a RAIS wood burning stove.

A RAIS wood burning stove is more than just a heat source:
it also shows that you care about design and quality in your home.

To make the most of your wood burning stove it is important that you read the manual thoroughly, before installing and using it.

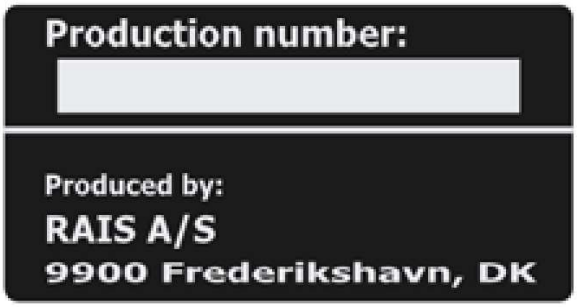
In the case of warranty coverage, and for general queries regarding your wood burning stove, it is important that you know the stove's production number. We therefore recommend that you note down the number in the table below. The production number is located on the back of the stove at the bottom.

Warranty

Your RAIS wood burning stove comes with a 5 year warranty. The warranty, however, does not cover heat-insulating materials, glass and seals.

Any alterations made to the stove will void the warranty.

The name bionic fire is a registered trademark.



Date: Distributor:

	bionic fire Steel socket	bionic fire Concrete socket	bionic fire Wood socket
Nominal output (kW)	4.6	4.6	4.6
Min./Max. output (kW):	3 - 5.5	3- 5.5	3 - 5.5
Heating area (m^2)	45-83	45-83	45-83
Stove's width/depth/height (mm) without socket	472-482-1064	472-482-1064	472-482-1064
Combustion chamber's width/depth/height (mm): upper combustion chamber	280-200-300	280-200-300	280-200-300
Recommended amount of wood when fuelling (kg). Distributed on 1-2 logs of wood of approx. 25 cm	1.1	1.1	1.1
Min. uptake / Min. draught (Pascal)	-12	-12	-12
Weight socket included (kg)	approx. 180 kg	approx. 215 kg	approx. 175 kg
Efficiency (%)	86	86	86
CO-emission at 13% O2 wood (%)	0.024	0.024	0.024
Particles emission acc. to NS3058/3059 (g/kg)	0.635	0.635	0.635
Dust measured acc. to Din+ (mg/Nm^3)	< 4	< 4	< 4
Smoke gas mass flow (g/s)	5.1	5.1	5.1
Smoke gas temperature (°C)	166°	166°	166°
Intermittent operation	Refuelling should be undertaken within 1½ hours		

Installation instructions

The following pages give instructions for the safe and proper installation of this heating appliance in the UK. These instructions cover the basic principles of installation, although detail may need slight modification to suit particular local site conditions. In all cases the installation must comply with current UK Building Regulations, Local Authority Byelaws and other specifications or regulations as they affect the installation of the stove. Please note that it is a legal requirement under England and Wales Building Regulations that the installation of the stove is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at www.hetas.co.uk.

It should be noted that the current Building Regulations requirements are given in Approved Document J. These requirements may also be met by adopting the relevant recommendations given in British Standards BS 8303 and BS EN 15287-1.

WARNING: Health and Safety Advice Notice
The installation of this heating appliance is governed by the Health and Safety at Work Act 1974. It is the responsibility of the installer to ensure that all requirements of this Act are met during the installation works. Attention is drawn in particular to the following:

Handling:
The appliance is a heavy item and adequate facilities must be available for loading, unloading and site handling.

Fire Cement:
Some types of fire cement are caustic and should not be allowed to come into contact with the skin. Protective gloves should be worn when handling fire cement. In case of contact with the skin wash immediately with plenty of water.

Asbestos:
This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts:
When installing or servicing this stove care should be taken to avoid the possibility of personal injury.

Important Warning –Preparatory Work and Safety Checks:

- This stove must not be installed into a chimney that serves any other heating appliance.
- It's recommended not have an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.
- If this appliance is installed into an existing chimney, the chimney must first be swept and examined for soundness and suitability before the appliance is installed (see also section headed "Chimney").

Convection

RAIS stoves are convection stoves. This means that the stove's back and side panels are not over-heated. Convection means that there is a circulation of air, which ensures that the heat is distributed more evenly throughout the entire room. The cold air is sucked in at the base of the stove up through the convection channel, which runs along the stove's combustion chamber. The heated air pours out at the top of the stove, which ensures a circulation of warm air throughout the room.

Chimney

The chimney is the driving force which makes the stove function. In order for the stove to perform satisfactorily the chimney height must be sufficient to ensure the correct draught of 14 to 18 Pa so as to clear the products of combustion and prevent problems of smoke emanating into the room when firing.
NOTE: A chimney height of not less than 4.5 metres measured vertically from the outlet of the stove to the top of the chimney should be satisfactory. Alternatively the calculation procedure given in BS 5854:1980 may be used as the basis for deciding whether a particular chimney design will provide sufficient draught.

The outlet from the chimney should be above the roof of the building in accordance with the provisions of Building Regulations Approved Document J.

If installation is into an existing chimney then it must be sound and have no cracks or other faults which might allow fumes into the house. Older properties, especially, may have chimney faults or the cross section may be too large i.e. more than 230 mm x 230 mm. Remedial action should be taken, if required, seeking expert advice, if necessary. If it is found necessary to line the chimney then a flue liner suitable for solid fuel must be used in accordance with Building Regulations Approved Document J.

Any existing chimney must be clear of obstruction and have been swept clean immediately before installation of the stove. If the stove is fitted in place of an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

If there is no existing chimney then either a prefabricated block chimney in accordance with Building Regulations Approved Document J or a twin walled insulated stainless steel flue to BS 1856-1 can be used. These chimneys must be fitted in accordance with the manufacturer's instructions and Building Regulations.

A single wall metal fluepipe is suitable for connecting the stove to the chimney but is not suitable for using for the complete chimney. The chimney and connecting fluepipe must have a minimum diameter of 125 mm. Any bend in the chimney or connecting fluepipe should not exceed 45°. 90°bends should not be used.

Combustible material should not be located where the heat dissipating through the walls of fireplaces or flues could ignite it. Therefore when installing the stove in the presence of combustible materials due account must be taken of the guidance on the separation of combustible material given in Building Regulations Approved Document J and also in these stove instructions.

If it is found that there is excessive draught in the chimney then either an adjustable flue damper or alternatively a draught stabiliser should be fitted. The adjustable flue damper should not close off the flue entirely but should in its closed position leave a minimum continuous opening free area of at least 20 % of the total cross sectional area of the flue or fluepipe.

Adequate provision e.g. easily accessible soot door or doors must be provided for sweeping the chimney and connecting fluepipe.

You should also familiarise yourself with the draught conditions for chimneys with 2 flues.

The flue outlet spigot is either 150 mm (6”) in diameter, or 129 mm (5”) in diameter.

For strong draughts, the chimney or flue should be fitted with a draught stabiliser. In which case, it is important to ensure that there is a free flow-through area of minimum 20 cm^2 when the regulating gate is shut. Otherwise, the fuel energy may not be used optimally. If, at any time, you are unsure about the condition of the chimney, you should contact a chimney sweep.

Remember that access to the access door should be kept clear.

Installation

The bionic fire is a free standing stove and can be placed on various types of sockets.

When installing the wood burning stove, there are some rules which MUST be followed:

The stove must be set up and installed in accordance with all current national and local rules and reulations. Local authorities and a chimney specialist should be contacted prior to set up.

It is prohibited to carry out unauthorised alterations to the stove.

There must be plenty of fresh air in the room where the stove is being installed, in order to ensure proper combustion. Note that any mechanical exhaust ventilation - e.g. an extraction hood - may reduce the air supply. Any air grates must be placed in such a manner, that the air supply is not blocked.

The floor structure must be able to carry the weight of the wood burning stove, as well as the weight of a chimney, if necessary.

The stove is placed on fireproof material.

When you choose where to set up your RAIS wood burning stove, you should consider the heat distribution to the other rooms. This will enable you to get the best use out of your stove.
The stove should be set up at a safe distance from inflammable materials.

See the manufacturer's plate on the wood burning stove.

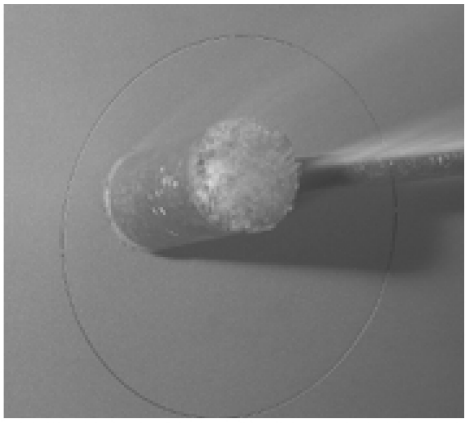
Upon receiving the stove must be inspected for defects.

NOTE!!
RAIS A/S recommends that the stove is installed by a qualified/ competent Rais dealer or a fireplace fitter recommended by an authorized RAIS dealer.

See www.rais.com for dealer list.

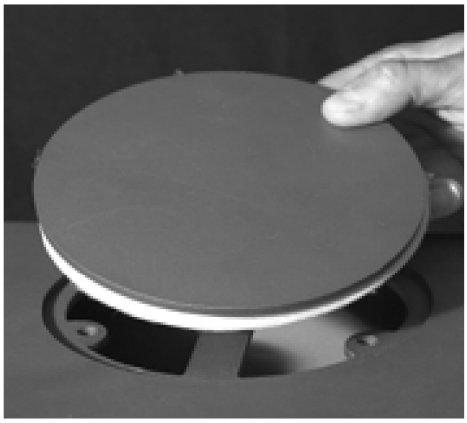
Change of chimney connection

The stove is delivered ready for top outlet, but may be changed to back outlet in the following way:

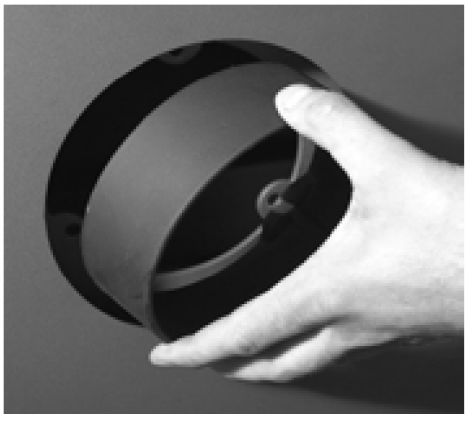


Strike out the knock out plate at the rear of stove.

Remove the blanking plate and the packing, and position them in the hovle at the top. Ensure that the packing is positioned correctly. Screw all elements together with the three M6 nuts.



Mount the flue collar (supplied by the dealer) and the clamp for the upper smoke conductor with three M6x20 cylinder screws and M6 nuts.



Mount the parts in reverse order.

Installation distance in case of combustible wall

To determine whether the wall next to where the stove is going to be installed is flammable, you should contact your building contractor or the local building authorities.

The hearth should be able to accommodate the weight of the stove. The chimney must be independently supported by wall brackets or a ceiling support plate. The weight of the stove is indicated in the brochure.

The stove should always be installed on a non-combustible hearth of a size and construction that is in accordance with the provisions of the current UK Building Regulations Approved Document J.

If the stove is to be installed on a wooden floor, it must be covered with a non-combustible material at least 12 mm thick, in accordance with UK Building Regulations Approved Document J, to at distance of 300 mm in front of the stove and 150 mm to each side measuring from the door of the combustion chamber.

The clearance distances to combustible material beneath, surrounding or upon the hearth and walls adjacent to the hearth should comply with the guidance on the separation of combustible material given in UK Building Regulations Approved Document J and also in these stove instructions.

Installation distance in case of combustible wall

Normal set-up - corner setting

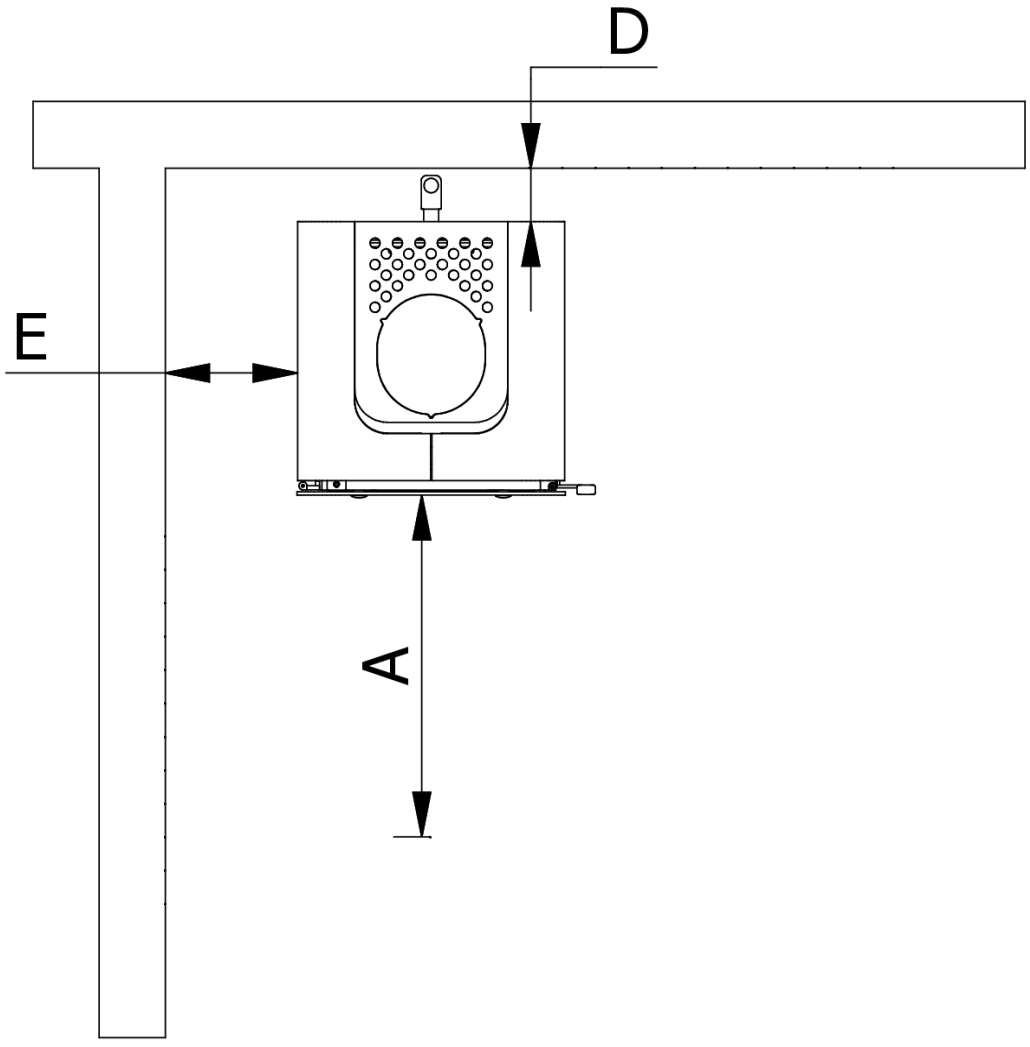
Uninsulated flue

A. Distance to furniture (min.) 500 mm

Distance to flammable materials (min.)

B. in front (floor) - if distances are not shown, national/local regulations are followed
C. to the side (floor) - if distances are not shown, national/local regulations are followed
D. to the rear (wall) 80 mm
E. o the side of the wall 200 mm

The distance D is changed to 80 mm due to the handle for the convection plate.



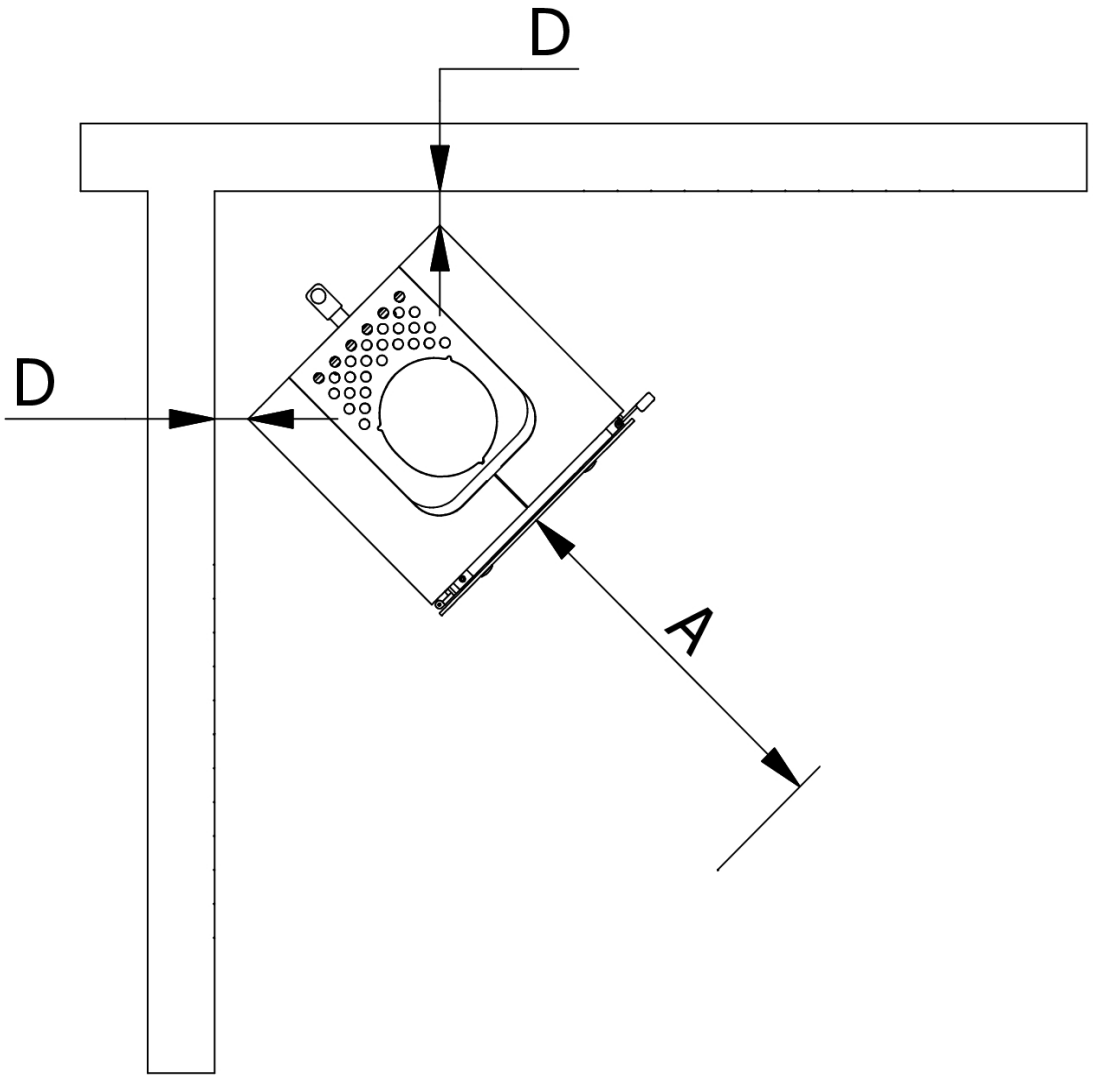
Corner setting 45°

Uninsulated flue

A. Distance to furniture (min.) 500 mm

Distance to flammable materials (min.):

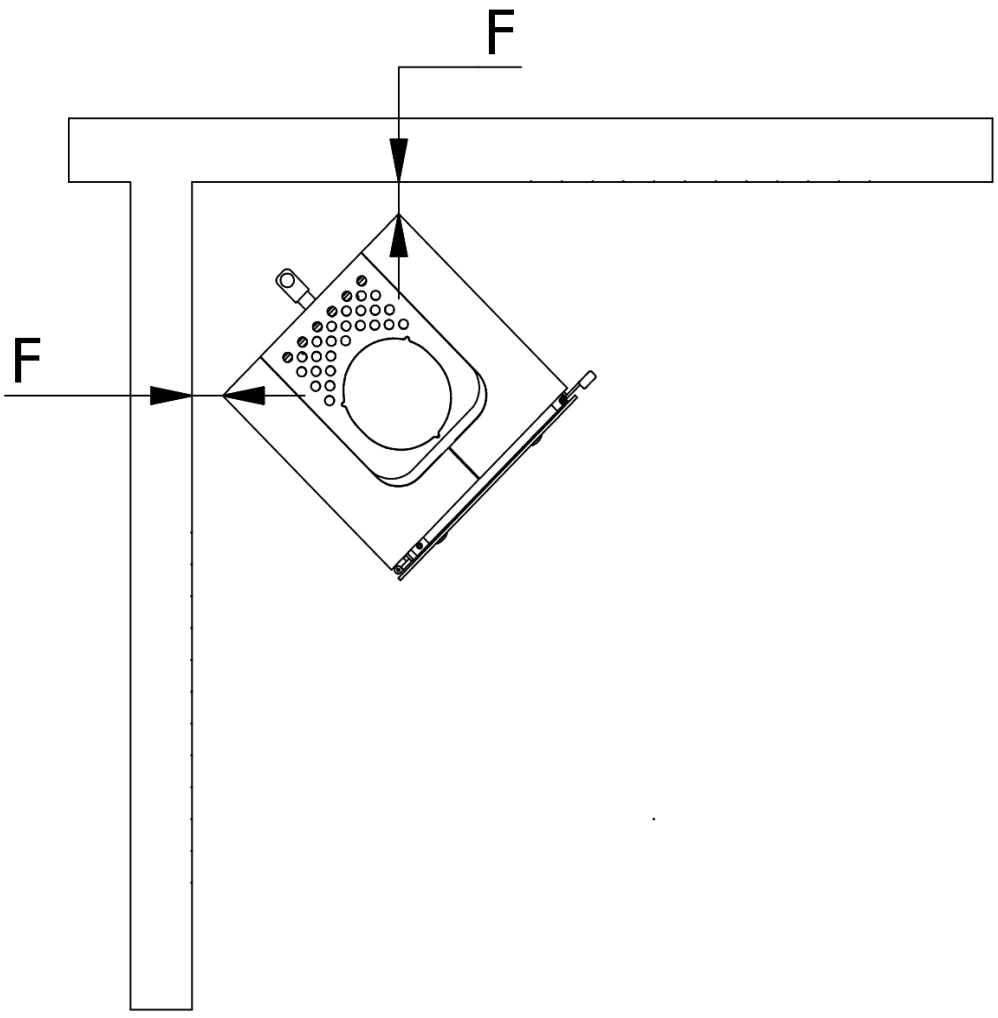
B. in front (floor) - if distances are not shown, national/local regulations are followed
C. to the side (floor) - if distances are not shown, national/local regulations are followed
D. to the rear (wall) 50 mm



Installation distance in case of non-combustible wall

We recommend a minimum distance to non-combustible material of 50 mm (F) for cleaning considerations.
It should always be possible to access the access door.

At normal set-up - corner the distance F to back wall is 80mm due to the handle for the convection plate.



For the Installer

Finally before firing the stove for the first time a check should be made to ensure that the assembly and stove installation has been satisfactory and that there are no leaks in any seals in the appliance and appliance connections to the chimney.

Ensure that the appliance and chimney flue are functioning correctly before finally handing over to the user. If necessary read the later parts of this manual for guidance on care required when first lighting.

Inform the user that the appliance has been commissioned and ready to use and give instruction on the safe operation of the stove.

These Instructions must be left with the user and the user should be instructed to keep them in a safe place.

Operating instructions

Please note that HETAS Ltd Appliance Approval only covers the use of dry seasoned wood logs on this appliance. HETAS Ltd Approval does not cover the use of other fuels either alone or mixed with the wood logs, nor does it cover instructions for the use of other fuels.

Fuel

The stove is designed and approved in accordance with EN 13240 and NS 3058 for stoking split, dried firewood. The firewood must have a water content of 15-22% and its max. length should be the width of the combustion chamber minus 50-60 mm.

Stoking with wet firewood causes both soot, environmental pollution and bad fuel economy. Freshly cut wood contains approx. 50-70% water and is thoroughly unsuitable for stoking. Count min. 1 year of storage time for newly cut wood before using.
Wood with a diameter of more than 100 mm should be split. Regardless of wood size, it should always have at least one surface area free of bark.

We do not recommend stoking with painted, laminated or impregnated wood, wood with a synthetic surface, painted refuse wood, chipboard, plywood, domestic waste, paper briquettes and pit coal, as this will produce malodorous smoke, which could be poisonous.

When firing with the above-mentioned items and amounts larger than those recommended, the stove is subjected to a larger amount of heat, which results in a higher chimney temperature and lower efficiency. This can result in the stove and chimney becoming damaged and would void the warranty.

The calorific value of the firewood is closely connected to the moisture level of the firewood. Moist firewood has a low heat value. The more water the wood contains, the more energy it takes for this water to vaporise, resulting in this energy being lost.

ONLY USE RECOMMENDED FUELS

The following table shows the calorific value of different types of wood, which have been stored for 2 years, and which have a residual moisture of 15-17%.

Wood	Kg dry wood pr. m^3	compared to beech/oak
Hornbeam	640	110%
Beech and oak	580	100%
Ash	570	98%
Maple	540	93%
Birch	510	88%
Mountain pine	480	83%
Fir	390	67%
Poplar	380	65%

1 kg of wood yields the same heat energy irrespective of wood type. 1 kg beech merely takes up less space than 1 kg of fir.

Drying and storage

Drying wood takes time: proper air drying takes approx. 2 years.

Here are some tips:

- Store the wood sawn, split and stacked in an airy, sunny place, which is protected against rain (the south side of the house is particularly suitable).
- Store the firewood stacks at a hand's breadth apart, as this ensures that the air flowing through takes the moisture with it.
- Avoid covering the firewood stacks with plastic, as this prevents the moisture from escaping.
- It is a good idea to bring the firewood into the house 2-3 days before you need it.

Room ventilation and stoves

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

The stove requires a permanent and adequate air supply in order for it to operate safely and efficiently.
In accordance with current Building Regulations the installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion air. This air vent should not under any circumstances be shut off or sealed.

Stove functioning

The stove has 2 combustion chambers:

- the upper combustion chamber (UCC) is for kindling/refuelling
- the lower combustion chamber (LCC) is for post-combustion and may **not** be used for kindling and refuelling

A post-combustion provides a good usage of the fuel energi and an almost complete combustion of the toxic and harmful substances from the smoke.

Upon lighting the air flows through the UCC and to the flue pipe (chimney). When the stove reaches a certain temperature, the air flow is diverted, and the still unburned gasses is lead from the UCC through an opening in the bottom stone plate to the LCC. Over the opening is placed a steel dome.

Flames are thus lead through the opening to the LCC for post-combustion of the gases.

Automatic regulation of combustion air

This stove is equipped with an independent and self-regulating air damper. Hence there is no damper handle.

The primary air is added to the primary combustion zone, i.e. the bed of glowing embers. This cold air is only used in the lighting stage.

Secondary air is air added in the gas combustion zone, i.e. air which contributes to the combustion of the pyrolysis gasses (preheated air, which is used for the cleaner glass system and combustion). This air is sucked through the damper and is pre-heated through the side channels and then emitted as hot scavenging air onto the glass. The hot air rinses the glass and keeps it soot-free.

A clean combustion is indicated by clear yellow flames.

The pilot nozzles are placed in the back plate of the upper combustion chamber. They ensure that the bed of glowing embers is fed with air and therefore holds a high temperature. It provides a quick start when refuelling and reduces the risk of fire going out.

IMPORTANT! - during kindling/refuelling

If an ash pan is used, it **must** be placed at the bottom of the lower combustion chamber.

First usage

IMPORTANT:
Place wood only in the upper combustion chamber This applies for kindling and refuelling.

A careful start pays off. Start with a small fire, so that the wood burning stove can get accustomed to the high temperature. This gives the best start and any damage is avoided.

Be aware that a strange but harmless odour and smoke concoction may emanate from the surface of the stove, the first time you fire up. This is because the paint and materials need to harden. The odour disappears quickly, but you should check the ventilation and draught, if possible. See also, the IMPORTANT warning notice below about persistent fumes.
During this process you must be careful not to touch the painted surfaces, and it is recommended that you regularly open and close the door to prevent the door seal from sticking.

The stove may also produce "clicking noises" during heating and cooling, caused by the large temperature differences which the material is subjected to.

Never use any type of liquid fuel for kindling or maintaining the fire. There is a danger of explosion.

The stove gets very hot when in use always wear protective gloves when tending the stove.

If the stove has not been used for a while, follow the steps as if you were using it for the first time.

IMPORTANT - Warning Note!

Properly installed, operated and maintained this appliance will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, the following immediate actions should be taken:

1. Open doors and windows to ventilate room.
2. Let the fire out or eject and safely dispose of fuel from the appliance.
3. Check for flue or chimney blockage, and clean if required.
4. Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

IMPORTANT - Warning Note!

Do not use an aerosol spray on or near the stove when it is alight.

IMPORTANT - Safety advice!

When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002 (Replaces BS 6539).

Lighting and fuelling

NOTE: If airsystem is connected, the valve must be open.

TIPS before firing up:

Open a door or window close to the wood burning. If there is a "storm" in the stove coming from the chimney, it is advisable to place a screwed-up piece of newspaper between the upper baffle plate and the chimney, set the paper on fire, and wait until you hear a "rumbling" noise in the chimney. This means that there definitely is a draught in the chimney and you avoid smoke in the room.

"Top-Down" lighting (see back of manual)

- Open the door and lock it using the small bracket at the bottom of the door.

- Start by placing 1 piece of split log - approx. 1 kilograms - at the bottom of the upper combustion chamber UCC in front of the dome close to the small front glas (1).
- Place approx. 1.2 kilograms of dry firewood, split into kindling sticks, behind the log (2) and a couple of alcohol briquettes or similar.
- Light the fire (3) and close the upper convection plate of the stove.

- Close the door and leave it ajar by tipping the handle.

- When the fire has caught the kindling (4) close the door completely (after approx. 5 min.).
- When the temperature reaches a certain value, the damper will divert the smoke. This causes a downward flame from the upper to the lower combustion chamber LCC (5-6).
- When the last flames are extinguished and there is a nice layer of embers (7), add 1-2 pieces wood - about 1-1 ½ kg (8). Place the wood on top of the dome at the rear of the UCC! Close the door completely.

NOTE!

If the fire has burned down too low (too small an ember), it may take longer time for the flames to be diverted to the LCC and thus achieve a cleaner burn.

When firing the smoke out of the chimney should be almost invisible; just a 'flicker' in the air is opserved.
When refueling, open the door carefully to avoid smoke escaping. Never add wood while it is burning (flames!) in the stove.

RAIS recommends to refuel with 1-2 pieces wood - approx. 1-1 ½ kg - within 1½ hours (intermittent operation).

ATTENTION!!!

Keep an eye on the stove when lighting. During operation the door should always remain shut.

Control

Look for signs that indicates a correct firing in the stove:

- ash is white
- the walls of the combustion chamber is free of soot
- the wood is sufficiently dry

1

2

3

4

5

6

7

8

Warning!!

If the firewood is only burning slowly without flames or is smoking, and too little air is added, unburned exhaust gasses are developed.
Exhaust gasses can be ignited and explode, leading to damage to material and possibly personal injury.

If there are only a few embers remaining you must light the fire again.

If you just add firewood the fire will not be lit, but unburned exhaust gasses will develop.

Here firewood has been added to an ember layer which is too small, and the air flow is too small - smoke is developed.

Avoid heavy smoke - danger of exhaust gas explosion.

In case of very heavy smoke, open the door and light the fire again.

Cleaning and care

Glass

Most woodstoves use a ceramic glass product which is resistant to heat but requires cleaning to keep its appearance.
Soot or opaque marks can easily cleaned if the marks are fresh, however If you leave the glass dirty for any length of time the acid from the wood can etch the surface of the glass permantley (wet unseasoned wood, soft wood such as used in the building industry, pallet wood should be avoided).
Only clean when cold.

Use only stove glass cleaners to re-move heavy tar/ soot deposits.
All other marks can normally be removed with a damp cloth, then dry with a clean cloth or newspaper, do not let the glass dry before applying a dry clean cloth.
With more stubborn marks i.e. opaque areas/frosting, you need put a small amount of wood ash on a clean damp cloth. If the opaque mark/frosting doesn't come out, contact your dealer for a special remover.

Paint finish

The appliance has been coated with a high temperature paint which can last for years. Do not clean with a damp cloth or any cleaning products as they can cause rust or discolouration. Only clean when cold use a brush with soft bristles or dust with a lint free cloth. Only re-spray when necessary.

The wood burning stove and the chimney must be serviced by a chimney sweep twice a year. During cleaning and care, the stove must be cold.

Prolonged period of non-use:

If the stove is to be left unused for a prolonged period of time then it should be given a thorough clean to remove ash and unburned fuel residues. To enable a good flow of air through the appliance to reduce condensation and subsequent damage, leave the air controls fully open.

Prior to a new heating season, it should be checked that the chimney and smoke gas connector are not blocked.

Cleaning the combustion chamber

Scrape/shovel the ash out and store it in a non-flammable container until it has cooled down. You can dispose of ash with your normal household waste.

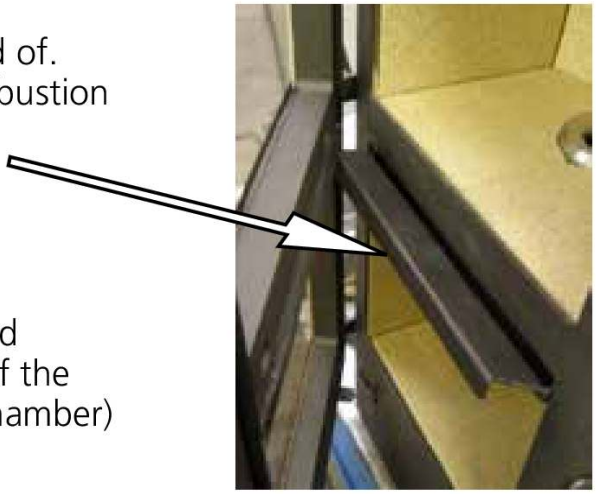
REMEMBER!! Never remove all the ashes from the combustion chamber - the wood will burn at its best with a layer of ashes of approx. 20 mm.
Remove gently the steel dome and the small front glass (ash stop).

Regarding the cleaning of the upper combustion chamber the ash pan can be used. The pan is placed underneath the UCC in 2 brackets.

Ash pan

Bracket

The ashes are swept on to the ash pan and disposed of. Replace the ash pan in its position in the lower combustion chamber again.



The ash pan must **not** remain under the upper combustion chamber:

- the door cannot be closed and can be damaged
- the ash pan will damage the special function of the stove (afterburning in the lower combustion chamber)

Cleaning of flue ways

Upper combustion chamber (UCC)

In order to acces the flue way gently remove the smoke converter plate (vermiculite) by tilting it to one side and turning it a little slantwise.

Pull out the plate carefully.
Remove dirt and dust, and mount the parts in reverse order.

NOTE!!

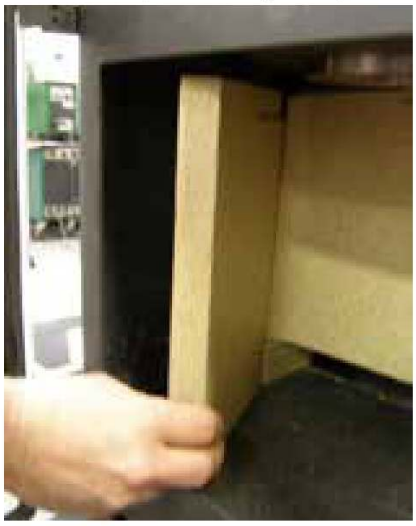
Be careful when replacing the smoke converter plate.

Lower combustion chamber (LCC)

1. One bracket for the ash pan under neath the UCC is removed (use Allen key 4mm).

2. The bottom plate is gently lifted out of its position with f. ex. a wide slotted scruedriver.

3. The side plate is gently removed.



4. The back plate is gently removed.

5. Remove dirt and dust, and mount the parts in reverse order.

NOTE!!

- Be careful when replacing the plates.

Interruption of operation

Smoke spillage around door:

could be due to too low draught in the chimney <12Pa

- check whether the flue or chimney is blocked
- check whether the extraction hood is switched on; if it is, switch it off and open a window/door in the proximity of the stove for a short while.

Soot on glass:

could be caused by the firewood is too wet.

- make sure that the stove is heated properly when firing up, prior to closing the door

Stove is burning too strong:

could be caused by:

- leak around the door seal
- chimney draught too large >22 Pa, draught control regulator should be installed.

Stove is burning too weakly:

could be caused by:

- too small amount firewood
- too little air supply for room ventilation
- unclean smoke channels
- leaky chimney
- leakage between chimney and flue

If your stove continues to malfunction, we recommend that you contact your RAIS distributor or chimney sweep.

WARNING!!

In case of chimney fire:

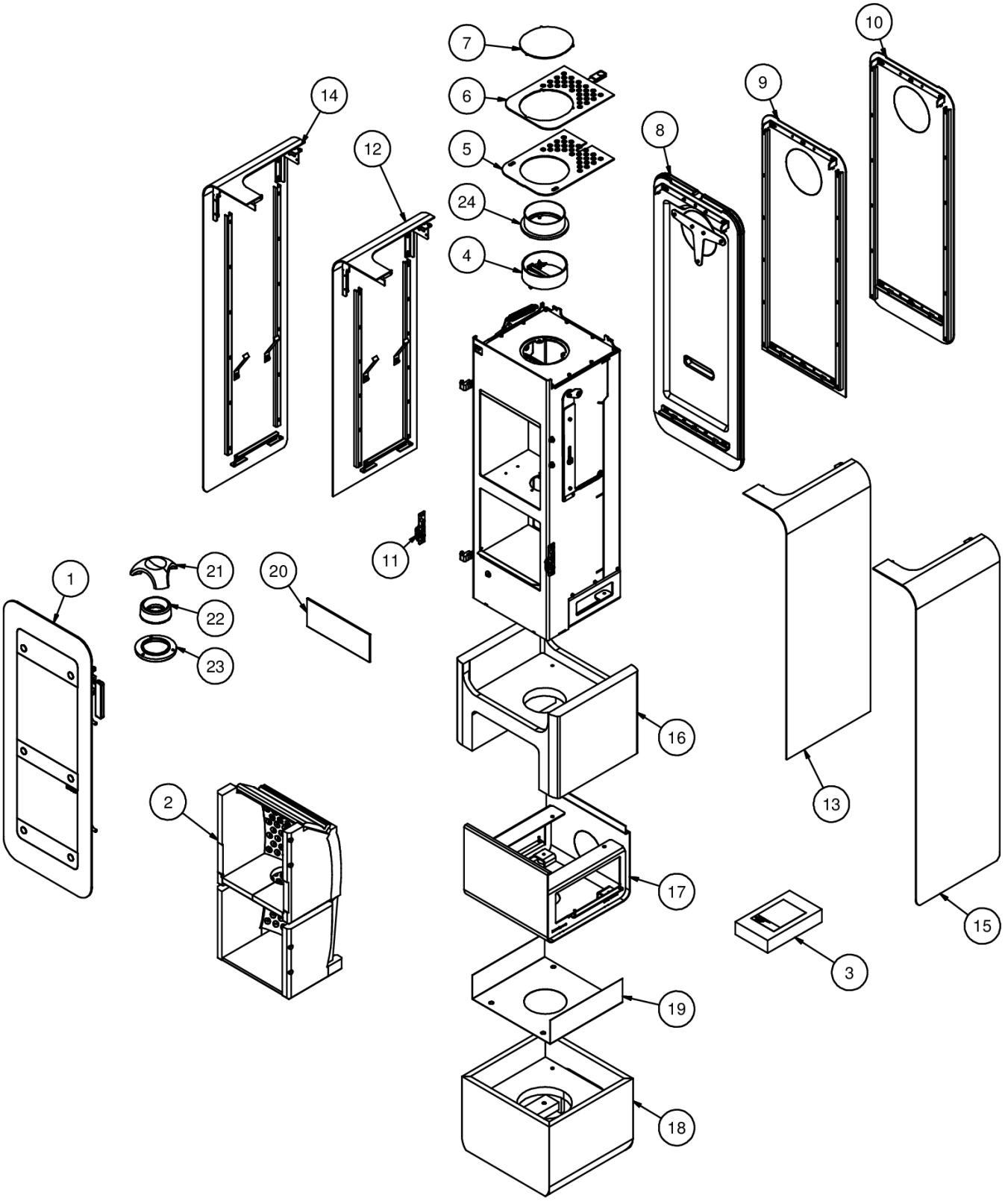
- shut off all air supply from outside (if installed) to the stove
- contact the fire department
- never attempt to put out fire with water!
- afterwards, you should ask your chimney sweeper to check the stove and chimney

IMPORTANT!!

- to ensure safe burning there must be clear yellow flames or clear embers at all times.
- the firewood should not be smouldering.

bionic fire

Spare Parts



Spare parts bionic fire

If spare parts other than those recommended by RAIS are used, the warranty is voided.

All replaceable parts can be bought as spare parts from your RAIS distributor.
For reference see spare parts drawing (back of user manual).

Pos.	Quantity	Part no.	Description
1	1	8501090	Glass door
2	1	9502200	Fire brick set
3	1	1015500	Seal set for glass door
4	1	61-00	Flue collar 6”
5	1	8500912SV	Convection bottom plate
6	1	8500911mon	Convection top plate
7	1	8500913	Top outlet cover
8	1	8507010mon	Concrete back panel
9	1	8500127sort	Back panel for steel/wooden socket
10	1	8500107sort	Back panel for concrete socket
11	2	9501890	Closing mechanism
12	1	8500101sort	Side panel left – concrete/wooden socket
13	1	8500102sort	Side panel right – concrete/wooden socket
14	1	8500121sort	Side panel left – steel socket
15	1	8500122sort	Side panel right – steel socket
16	1	8500401	Concrete socket
17	1	8500402sort	Steel socket
18	1	850041190	Wooden socket
19	1	8504101	Reflector plate for wooden socket
20	1	9505010	Stop for ashes (glass)
21	1	9502250	Dome top
22	1	9502251	Dome bottom
23	1	9502252	Flame guard
24	1	61-105	Flue collar 5”

Accessories

00065172290

Rear air system connection

0065172390

Bottom air system connection

DECLARATION OF PERFORMANCE

Regulation (EU) 305/2011 No. 0001 — CPR-2013/07/01

No.: 950

1. **Unique identification code of the product-type** — RAIS bionic fire ATTIKA bionic fire
2. **Type** — Room heater burning solid fuel without hot water supply
3. **Intended use** — Domestic room heater
4. **Manufacturer** — RAIS A/S, Industrivej 20, Vangen, DK-9900 Frederikshavn, Denmark
   Telephone +45 98 47 90 33
   Telefax +45 98 47 92 91
   Webmail kundeservice@rais.dk
   Homepage www.rais.com
5. **Authorised representative** — n/a
6. **System of assessment AVCP** — System 3
7. **Notified body** — The notified laboratory *Danish Technological Institute - Identification no. 1235, Teknologiparken, Kongsvang Allé 29, DK-8000 Århus C* performed the determination of the product type on the basis of type testing under system 3 and issued test report
   a. 300-ELAB-1813-EN

8. **Declared performance** — Harmonized technical specification: EN 13240:2001/A2:2004/AC:2007

Essential characteristics	Performance	
Fire safety		
Reaction to fire	A1	Uninsulated flue
Distance to combustible materials Minimum distances [mm] *For other installation settings see instruction manual*	Rear	50
	Sides	200
	Ceiling	-
	Front	500
	Floor	-
Risk of burning fuel falling out	Pass	
CO-emission of combustion products	0.024 %	
Surface temperature	Pass	
Electrical safety	Pass	
Cleanability	Pass	
Maximum operating pressure	- bar	
Flue gas temperature T at nominal heat output	166 °C	
Mechanical resistance (to carry a chimney/flue)	NPD	
Thermal output		
Nominal heat output	5.3 kW	
Room heating output	5.3 kW	
Water heating output	- kW	
Energy efficiency η	86 %	

9. **The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.**

Signed for and on behalf of the manufacturer by: Henrik Nørgaard, Managing Director

Place FREDERIKSHAVN, DENMARK

Date 25-06-2013

Signature

CE

Produced at:

RAIS A/S, Industrivej 20, 9900 Frederikshavn, Danmark

EN 13240:2001+A2:2004
EC.NO: 950

13

bionic fire

Raumheizer für feste Brennstoffe
Appliance fired by wood
Poêle pour combustibles solides

AFSTAND TIL BRÆNDBART, BAGVÆG ABSTAND ZU BRENNBAREN BAUTEILEN, HINTEN DISTANCE TO COMBUSTIBLE BACK WALL DIST. ENTRE COMPOSANTS COMBUSTIBLES, ARRIÈRE	DK: 50 mm/SE BRUGERVEJLEDNING DE: 50 mm/SIEHE BEDIENUNGSANLEITUNG UK: 50 mm/SEE USER MANUAL FR: 50 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR
AFSTAND TIL BRÆNDBART, SIDEVÆG ABSTAND ZU BRENNBAREN BAUTEILEN, SEITE DISTANCE TO COMBUSTIBLE SIDE WALL DISTANCE ENTRE COMPOSANTS COMBUSTIBLES, COTÉ	DK: 200 mm/SE BRUGERVEJLEDNING DE: 200 mm/SIEHE BEDIENUNGSANLEITUNG UK: 200 mm/SEE USER MANUAL FR: 200 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR
AFSTAND TIL BRÆNDBART, MØBLERING ABSTAND VORNE ZU BRENNBAREN MÖBELN DISTANCE TO FURNITURE AT THE FRONT DISTANCE ENTRE COMPOSANTS COMBUSTIBLES, DEVANT	DK: 500 mm/SE BRUGERVEJLEDNING DE: 500 mm/SIEHE BEDIENUNGSANLEITUNG UK: 500 mm/SEE USER MANUAL FR: 500 mm/CONSULTEZ LE GUIDE DE L'UTILISATEUR
CO EMISSION CO EMISSION IN DEN VERBRENNUNGSPRODUKTEN EMISSION OF CO IN COMBUSTION PRODUCTS EMISSION CO DANS LES PRODUITS COMBUSTIBLES	DK: 0,024 % DE: 0,024 % / 300 mg/Nm3 UK: 0,024 % FR: 0,024 %
STØV / STAUB / DUST / POUSSIÈRES:	DK: <4 mg/Nm3 / DE: <4 mg/Nm3 UK: <4 mg/Nm3 / FR: <4 mg/Nm3
RØGGASTEMPERATUR / ABGASTEMPERATUR / FLUE GAS TEMPERATURE / TEMPÉRATURE DES GAZ DE FUMÉE:	DK: 166 °C / DE: 166 °C UK: 166 °C / FR: 166 °C
NOMINEL EFFEKT / HEIZLEISTUNG / THERMAL OUTPUT / PUISSANCE CALORIFIQUE:	DK: 4,6 kW / DE: 4,6 kW UK: 4.6 kW / FR: 4,6 kW
VIRKNINGSGRAD / ENERGIEEFFIZIENZ / ENERGY EFFIENCY /EFFICACITÉ ÉNERGÉTIQUE:	DK: 86 % / DE: 86 % UK: 86 % / FR: 86 %
DK: Brug kun anbefalede brændsler. Følg instrukserne i brugermanualen. Anordningen er egnet til røggassamleledning og intervalfyring.	DK: BRÆNDE
DE: Lesen und befolgen Sie die Bedienungsanleitung. Zeitbrandfeuerstätte. Nur empfohlene Brennstoffe einsetzen.	DE: HOLZ
UK: Fuel types (only recommended). Follow the installation and operating instruction manual. Intermittent operation.	UK: WOOD
F: Veuillez lire et observer les instructions du mode d'emploi. Foyer à durée de combustion limitée, homologué pour cheminée à connexions multiples. Utiliser seulement les combustibles recommandés.	FR: BOIS

Hergestellt für / Produced for:
ATTIKA FEUER AG, Brunnmatt 16, CH-6330 Cham / RAIS A/S, Industrivej 20, DK-9900 Frederikshavn

15a B-VG
VKF-NR:
xxxxx
Typ FCxxxFCxxx

DECLARATION OF PERFORMANCE

Regulation (EU) 305/2011 No. 0001 — CPR-2013/07/01

No.: 950

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   Telephone +45 98 47 90 33
   Telefax +45 98 47 92 91
   Webmail kundeservice@rais.dk
   Homepage www.rais.com
5. **Authorised representative** — n/a
6. **System of assessment AVCP** — System 3
7. **Notified body** — The notified laboratory *Danish Technological Institute - Identification no. 1235, Teknologiparken, Kongsvang Allé 29, DK-8000 Århus C* performed the determination of the product type on the basis of type testing under system 3 and issued test report
   a. 300-ELAB-1813-EN

8. **Declared performance** — Harmonized technical specification: EN 13240:2001/A2:2004/AC:2007

Essential characteristics	Performance	
Fire safety		
Reaction to fire	A1	Uninsulated flue
Distance to combustible materials Minimum distances [mm] *For other installation settings see instruction manual*	Rear	50
	Sides	200
	Ceiling	-
	Front	500
	Floor	-
Risk of burning fuel falling out	Pass	
CO-emission of combustion products	0.024 %	
Surface temperature	Pass	
Electrical safety	Pass	
Cleanability	Pass	
Maximum operating pressure	- bar	
Flue gas temperature T at nominal heat output	166 °C	
Mechanical resistance (to carry a chimney/flue)	NPD	
Thermal output		
Nominal heat output	5.3 kW	
Room heating output	5.3 kW	
Water heating output	- kW	
Energy efficiency η	86 %	

9. **The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.**

Signed for and on behalf of the manufacturer by: Henrik Nørgaard, Managing Director

Place FREDERIKSHAVN, DENMARK

Date 25-06-2013

Signature

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